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Mothers' Motivations to Participate in a Pregnancy Health Survey

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Synopsis

An important question in interpreting epidemiologic data is why some persons agree to participate in a health survey while others do not. Information about why people agree to interview or answer a questionnaire could help researchers to devise procedures for a health survey and to chose information to be communicated in the interview or questionnaire so as to increase subjects' participation.

The authors interviewed 180 mothers who gave birth to a child with a birth defect and 198 mothers whose children were born without a birth defect. The interviews were part of two case-control studies to determine risk factors for selected birth defects. In the course of the interviews, each mother was asked why she agreed to be interviewed, and whether anything about the survey procedures that were followed could be improved. Among both the case mothers and the control mothers the most common reason for agreeing to be interviewed was humanitarian, expressed as "to help others" or "to prevent what happened to my baby from happening to babies in the future."

Case mothers, more frequently than control mothers, gave as their reason for participating either to help themselves, their child, their family, or to further scientific understanding. Emphasizing these as benefits of participation to those who are survey subjects at the time of the initial contact could increase the proportion who agree to respond.

Nonresponse by persons who are the subjects of an epidemiologic survey can bias study results (1). Epidemiologists often ask why some people agree to participate in a health survey interview or respond to a mailed questionnaire, while others do not.

Generally, little information is available on people who are subjects of a survey but who cannot be located. More information may be available on those who are located but who refuse to participate. For those who agree to participate in a study, much descriptive information potentially is available both on them and their motivations to participate.

Better understanding of the reasons why some people agree to participate in health surveys could help epidemiologists in increasing subjects' participation. That knowledge would help those designing a survey to make more effective approaches to people who are subjects and to make better selections of the information to be communicated during an interview or in a questionnaire.

Methods

Two case-control studies were conducted by the California Birth Defects Monitoring Program, which is administered by the March of Dimes Birth

Reasons given by 378 women for why they agreed to be interviewed in a health-related survey

Reason	Cases (N = 180)		Controls (N = 198)	
	Number	Percent ¹	Number	Percent ¹
To help others (humanitarian)	80	44.4	72	36.4
To help self or family (personal)	69	38.3	27	13.6
To find causes of birth defects (scientific)	44	24.4	29	14.6
Interviewer convinced her (social pressure)	8	4.4	32	16.2
Friend or family member convinced her (social pressure)	2	1.1	4	2.0
March of Dimes reputation (positive organizational image)	3	1.7	10	5.0
Fear of retaliation	0	...	1	0.5
Cash incentive	0	...	3	1.5
Don't know or no reason given	0	...	2	1.0
Good idea, curious (nonspecific motive)	19	10.5	39	19.7
Interviewer skipped question	1	0.5	3	1.5

¹ Totals more than 100 percent because some participants gave more than one reason.

Defects Foundation (2). The studies involved a group of infants diagnosed with either gastroschisis or a neural tube defect and a control group of infants with no major structural defect diagnosed in the newborn period. Home addresses and telephone numbers of the mothers were obtained from hospital medical records or genetic centers.

In the course of the interviews we obtained data from the participating mothers on their reasons for consenting to be interviewed and on their impressions of the survey contact procedures. The data were obtained in a 6-month period between March and October 1990. All those interviewed were asked two open-ended questions by a trained interviewer. Prior to the interview, each mother was asked: "Can you tell me why you agreed to be interviewed for our study?" At the end of the interview she was asked: "We would like to improve the procedures that we use to contact women such as yourself for our studies. Is there anything about our letters or telephone calls prior to the interview that you feel could be improved?"

A total of 180 case mothers and 198 control mothers were surveyed for their answers to the questions; 11 eligible case mothers and 15 eligible control mothers refused to be interviewed; 4 case mothers and 9 control mothers could not be located to be interviewed.

The women received an initial contact letter between 1 and 3 months following delivery or their estimated date of confinement asking their consent to be interviewed for a research study on birth defects. The letter requested that the woman return a card indicating her interest in participating. Those who did not respond were sent a followup letter. One week later, both responders and nonresponders were called by telephone. Women who consented to an interview were interviewed by

trained interviewers (in English or Spanish) in their homes between 2 and 6 months from the date of delivery or their estimated date of confinement.

Women concerned about child care expenses incurred in the 2-hour interview were offered up to \$15 as reimbursement for child care. Women who refused to be interviewed were offered \$25 in cash for their consent to interview. The offer was made orally to those with telephones and in writing to others.

Results

Responses to the question about why the person had agreed to be interviewed were grouped into 10 categories of motivation. A total of 226 responses were given by 180 case mothers and 222 responses by 198 control mothers (see table). Among both case and control mothers, the most common reason for agreeing to an interview was a humanitarian one, expressed as "to help others," or "to prevent what happened to my baby from happening to babies in the future."

Case and control mothers differed on personal motives, which were to help themselves, their child, or their family. This motive was offered more frequently by case mothers than by control mothers. Scientific considerations were mentioned more frequently by case mothers. This interest was expressed in such responses as "to find causes of birth defects." Conversely, inducement by study interviewers or name recognition of the March of Dimes accounted for a larger proportion of responses among control mothers.

Mothers in both groups offered nonspecific reasons for consenting to an interview. These included such responses as "a good idea," "to help," and "curious." Only three, all control mothers, indi-

cated that the \$25 cash payment offered had been a motivating factor.

Respondent Impressions

Most participants commented on the satisfactory nature of the contacts and had no suggestions for improvement (72.2 percent of case mothers and 61.1 percent of control mothers). Impressions were not solicited from 10.0 percent of case mothers and from 13.1 percent of control mothers. Respondents specifically remarked (8.9 percent of cases and 13.6 percent of controls) that telephone calls to follow-up initial contact letters were worthwhile.

Some case and control mothers (6.1 percent of the total) indicated that they did not read the initial contact letters. One reason for not opening the letter was that given by four control mothers who thought that it was soliciting contributions for the March of Dimes. Comments on the contact letter included suggestions to shorten it, eliminate it, make it more persuasive, send it earlier in relation to the event, send it later, or include a better explanation of why the respondent had been selected.

The last suggestion, made by three case mothers and one control mother, reflected confusion over a statement in our letter that she had been selected to participate in the study because she had been pregnant in 1989 or 1990. Case mothers remarked that they knew they had been selected to participate because they had a child born with a birth defect. The control mother, knowing that other women had been pregnant during the period, still wondered why she had been selected to participate.

Discussion

Women who had been pregnant recently participated in studies of birth defects for both humanitarian and personal reasons. Although we did not try to learn specifically whether payment was a major motivating factor, the \$25 cash incentive was rarely offered by respondents as an explanation of why they had agreed to be interviewed.

Of particular interest to those conducting reproductive epidemiologic studies are the slight differences in the motivation of case mothers and control mothers. Case mothers expressed a somewhat more personal interest in the studies than did control mothers, who were more likely to be convinced to participate by the interviewers. We do not know how the differences seen might influence the accuracy of a woman's reporting of exposure experi-

enced during pregnancy. Nevertheless, the point is of interest, in view of the attention given the issue of recall bias in studies of children with congenital malformations (3-5).

The differences in motivation, along with the request by both case and control mothers to be provided with more information, suggest that providing case and control mothers with slightly different information may be an approach to improving participation. Others (6) who have assessed why people participate in surveys have noted that the quality of the resulting data is not affected by the respondent's particular motivation, whether driven by a desire to actualize her own values (internalization) or to play out a relationship with the interviewer (identification).

This finding suggests that our attempt to improve participation would involve no risk to the integrity of the data if case subjects were told in the initial contact letter that they were selected to be interviewed because they had given birth to a child with a birth defect. Similarly, controls could be told that they had been selected specifically because they had given birth to an infant without a birth defect. A brief description of the sampling scheme for controls and their irreplaceability could be included to incorporate the suggestion that the letter be made more persuasive. One might expect that different impressions of our contact procedures would be received from women who refused to be interviewed, a group we have not surveyed.

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